

## TSUNAMI !

### Safety Tips for the County of Maui Coast Line

#### What is a Tsunami?

- A tsunami (soo-NAH-mee) is a series of traveling ocean waves of extremely long length. These generally appear as a large, steep wave face and produce rapid flooding of low-lying coastal areas. These are generated by disturbances associated primarily with earthquakes occurring below or near the ocean floor. This can also be generated by landslides, both above and beneath the surface of the ocean.
- It may take hours for tsunami waves to reach the Coast of Maui County following an earthquake far out in the Pacific Ocean. The Pacific Tsunami Warning Center located on Oahu alerts local officials who may order evacuation. Some isolated areas may not receive official announcements. If you notice a sudden drop or rise in sea level, it may be a warning of impending danger. Move to high ground or inland immediately.
- The waves can kill and injure people and cause great property damage where they come ashore. The first wave is often not the largest and may be spaced many miles and minutes apart. They may also continue to arrive for several hours.
- The most destructive tsunami can be classified as local or regional, meaning their destructive effects are confined to coasts within 60 - 600 miles of the source -- usually an earthquake. It follows that the majority of tsunami related casualties and property damage also come from local tsunami. Between 1975 and 1998 there have been at least eighteen in the Pacific and its adjacent seas resulting in significant casualties and/or property damage

#### Where and when do tsunamis occur?

- Tsunamis can inflict severe damage to property and pose a threat to life in coastal communities. Although most people imagine a tsunami as a large, steep wave breaking on the shore, tsunamis generally appear as an advancing tide without a developed wave face and produce rapid flooding of beaches open to the ocean, low-lying coastal areas, bay entrances or tidal flats, and the shores of coastal rivers. Tsunamis can occur at any time of the day or night, under any and all weather conditions, and in all seasons.

#### How do I know when to evacuate?

- A strong off-shore earthquake may generate a tsunami. Therefore, if you feel the ground shake, evacuate inland or to high ground immediately and return only after officials say it is safe to do so.
- During distant source tsunami events, local Civil Defense officials will advise citizens to evacuate by sounding the Civil Defense sirens, making an announcement over the Emergency Alert System (EAS) or over NOAA Weather Radio or local radio broadcasts. Compliance is voluntary, but orders are given only in the most serious of circumstances.

#### Where do I evacuate?

- Go to an area 50 feet above sea level, if possible. If you don't have time to travel to high ground, but are in a multi-story building, go to an upper level of the home or building. If you are on the beach and unable to get to high ground go inland as far as you can. The tsunami evacuation maps found in the Verizon Telephone Book illustrates the primary evacuation routes. Take your disaster supply kit with you, if possible.
- Shelters will be opened as needed. Listen to your radio for details. Pets are NOT allowed at emergency shelters so please plan ahead for their safety

How do I get inland or to high ground?

- Go on foot if necessary, particularly if an earthquake has caused damage to roads, power lines, and resulted in significant debris.
- Remember:
  - Never go to the coast to watch a tsunami. Tsunamis move faster than a person can run. If you are camping on or near the beach, you may have to abandon your campsite to go inland or to higher ground to save your life.
  - Do not return to shore after the first wave. Wait for Emergency Management officials to give the "All Clear" before you return.
  - If you see an unexpected rise or fall in the coastal water, a tsunami may be approaching. Do not wait - instead move inland or uphill as quickly as possible.
  - Stay tuned to your radio, marine radio or NOAA Weather Radio during a disaster. Bulletins will be issued regularly through local Emergency Management officials and National Weather Service.
  - Call 9-1-1 only for life threatening emergencies.

What should I do if an earthquake occurs while at the coast?

- Drop, cover and hold. Get under a sturdy object and hold on. Watch for falling objects.
- As soon as the shaking is over, move to high ground or inland. Do not wait for an official warning.
- Stay away from the coast. Waves may continue to arrive for hours.
- Listen to your local radio station for an official "All Clear" notice before returning to the coastal area.
- Be alert for aftershocks.

What can I do to protect myself from a tsunami?

- Develop a family disaster plan. Everyone needs to know what to do on their own to protect them from an earthquake.
- Be familiar with local Emergency Management earthquake and tsunami plans. Know where to go to survive a tsunami.
- Be prepared to survive on your own for a minimum of three days.
- Prepare a disaster supply kit for your home, automobile and work. A list of recommended supplies for your kit can be found on this web site.
- Take a first aid course and learn survival skills. Knowledge is your greatest defense against potential disaster.

Community Plans

Residents who may be impacted by tsunami activity, but do not have an "official"

route or congregation area within a reasonable distance, are urged to work together to develop an evacuation plan within their neighborhood or community. A plan should address property access and private property issues, safe evacuation routes within a reasonable distance for foot or vehicle traffic, and what might be expected in terms of numbers of people needing to access a locally organized congregation area.

Important numbers to remember:

- The Maui Civil Defense Agency 808 270-7285
- NOAA Weather Radio frequencies
  - 162.40
  - 162.55
- NOAA Weather telephone numbers
  - Maui 871-6706
  - Moloka'i 565-6033
  - Lana'i 552-2477
- Radio Stations
  - KMVI-AM 550
  - KNUI-AM 900
  - KAOI-AM 1110
  - KPOA-FM 93.5
  - KDLX-FM 94.3
  - KAIO-FM 95.1 / 96.7
  - KMVI-FM 98.3
  - KLHI-FM 101.1
  - KNUQ-FM 103.3 / 103.7
  - KONI-FM 104.7
  - KPMW-FM 105.5

Emergency Shelters (revised 9/22/2005)

- Shelters for Maui County can be located by going to <http://www.co.maui.hi.us/departments/CivilDefense/shelters.pdf>.
- The County of Maui has Tsunami flood zone maps available for download at <http://www.co.maui.hi.us/departments/CivilDefense/tsunami.htm>